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ABSTRACT

A three-year partnership between the University of Massachusetts (Amherst), a group of school systems, the Massachusetts High Technology Corporation, and Digital Equipment Corporation achieved the goal of recruiting outstanding BA and BS graduates, with majors in math or science, into teacher education and teaching. The success of the Math/Science/Technology Education Project (M/S/TEP) is a result of the partnership. This paper identifies eight factors critical to the success of this program which can be applied to similar partnership efforts. Factors include: (1) clarity and perceived priority of objectives; (2) short and long-term measurability of success; (3) service to self-interest of each partner; (4) indispensability of each partner; (5) power and authority of each partner's representative; (6) recognition of different capacities of, and constraints upon, each organization; (7) benefit of ambition and risk taking; and (8) commitment to coordination and management. (JD)

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FACTORS INFLUENCING SUCCESS IN A SCHOOL-UNIVERSITY-INDUSTRY PARTNERSHIP FOR TEACHER EDUCATION

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A group of school systems, the School of Education of the University of Massachusetts at Amherst, and the Massachusetts High Technology Council and Digital Equipment Corporation established a partnership in 1983 to recruit into teacher education and teaching outstanding young BA and BS graduates who had majored in math or a science. The partnership, governed by a 12-member steering committee, was, and is, effective. The recruitment goal was met and has been documented (see Clark et al., "Recruiting Talent Into Public School Teaching: An Analysis From One Successful Pilot Program," Journal of Teacher Education, Vol. XXXV, #6, Nov.-Dec. 1984, pp. 2-4). Success of the Math/Science/Technology Education Project (M/S/TEP) in recruiting what may be the nation's strongest group of prospective math-science teachers is a direct function of the partnership.

Given the importance of the partnership, we have reflected about why it has worked so well, from design to implementation to institutionalization. Eight generalizations emerge. We suspect that they are applicable to other partnership efforts.

(1) There is strong agreement regarding the objectives and the high priority which they should command.

Each partner had an unequivocal commitment to the "recruitment-of-excellence-now" goal. This commitment was reinforced by widely disseminated data, including national and regional reports.

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(2) The achievement of objectives can be assessed, described, and publicized; objectives include short-term opportunities for success.

Within the first nine months of the M/S/TEP partnership, school system and industry internships had to be identified, state approval had to be achieved, a summer school site and program had to be developed, the first pool of applicants had to be generated, and most central, the most promising candidates had to be selected and recruited. Full or partial achievement of each of these objectives was measurable, and positive results provided the partners with a clear, early, and ongoing sense of productivity and positive aspirations for the future.

(3) Each partner sees a clear relationship between the objectives and his or her institution's self-interest.

From a defensive posture, each partner had been cited as part of the problem--the schools, for poor salaries and working conditions; the University, for mediocrity and low standards; industry, for raiding the schools for talent. More positively, schools and the University wanted better teaching candidates and teachers, and industry wanted public schools to which its current and prospective employees would be eager to send their children.

(4) At the outset there is at least a broad concept of how the goals will be met; over time the concept is crystallized; and at all stages it is clear that each partner is essential for the whole to work.

Major elements of the M/S/TEP concept included paid internships in school systems and industry, and academic work leading to a Master's Degree and certification. The partners needed each other to implement the concept.

(5) At least one representative of each partner organization has sufficient authority, or public authorization, to act by persons in power positions, to be credible as a decision-maker and resource allocator in meetings of the partnership.

Schools were represented by superintendents, the University by an Associate Dean with support of the Dean and President, and Digital by the Manager of U.S. College Relations with support

of the Vice President for Educational Services. When any partner agreed to do something, or to allocate resources, others at the table believed that the agreement would be fulfilled. Partners seldom had to "check back" with the home institution to get permission. Instead, they would go back to get jobs done.

(6) Each collaborating organization has different capacities and faces different constraints in making the Project work; these are mutually recognized and appreciated.

Schools have the authority and resources to hire interns and program graduates; they also have constraints, including school committee and teacher organization policies. The University has the authority to admit, offer courses, and award degrees to candidates; it also has a tradition of committee review, 18-month lead time to start or make changes in academic programs, and minimal program development or management budget. Industry has the capacity to hire interns and graduates, to provide other discretionary resources, and to lend political support; it also has a primary goal of making a profit, even when the economy is dismal. Recognition of the unique capacities enabled more ambitious ways of thinking and planning about how to achieve the major objective. Recognition of unique constraints prevented the partners from slipping into a blaming mode when something could not get done by one or another member.

(7) The partnership is strengthened by selecting goals and designs which are ambitious, innovative, and involve some risk of failure.

Particularly in the early stages of designing and implementing the M/S/TEP, it seemed necessary to make the commitment to proceed in spite of a host of ambiguities, including: unknown potential candidate interest, uncommitted school and industry internships, unclear curriculum & faculty assignment, and only tentative approval by the Bureau of Certification. Chickens and eggs abounded. If we could recruit the "best" candidates, which required internships, then we could get internships, which would then let us get approval for certification, which we needed to recruit . . . . The partners agreed to proceed on all fronts simultaneously, recognizing the risk. The adventure, with its ambiguity, tended to cement the group.

(8) Resources are committed to managing the work of, and generated by, the Partnership.

Coordinating, communicating, clarifying, organizing, and following up may be the least glamorous yet most important element in making

a partnership work. Managing may also be the most neglected and underestimated need of partnerships. In the case of M/S/TEP, the minimal resources allocated to management and periodic ambiguity about management responsibilities have posed the greatest threats to the partnership's viability. These threats were strongest in the first year when no added funds were allocated for Project management, and in the third year, when management personnel shifted.

The preceding list is not exhaustive. For the M/S/TEP, the stability of the steering committee, the influence of some of its members within and outside their respective organizations, and the willingness of school, business, and University administrators to support the effort have been important. The positive business environment in Massachusetts, coupled with a diminished federal role in public education, helped. The eight generalizations, however, appear to have validity across a variety of contexts and conditions.